



AH211A

MERCURY VAPOUR RECTIFIER

Service Type CV532

To be read in conjunction with the Rectifier and Thyatron Preamble.

ABRIDGED DATA

Hot cathode mercury vapour rectifier.

Peak inverse anode voltage	16	kV max
Peak anode current (at 16kV p.i.v.)	8.0	A max
Mean anode current (at 16kV p.i.v.)	2.0	A max
Fault anode current (0.1s max)	100	A max

GENERAL

Electrical

Filament		oxide coated
Filament voltage	2.5	V
Filament current	30	A
Filament pre-heating time (minimum)	1.0	min

Mechanical

Overall length	13.375 inches (339.7mm) max
Overall diameter	2.875 inches (73.0mm) nom
Net weight	1¼ pounds (0.5kg) approx
Mounting position	vertical, base down
Base	B.S.448-B2D
Top cap	B.S.448-CT9

CONTROL OF CONDENSED MERCURY TEMPERATURE

On the following pages two curves are given showing:

1. Total heating time for any value of ambient temperature. This is for use when the tube is being switched on from cold.
2. Rise of condensed mercury temperature above ambient plotted against heating time and cooling time. This can be used as indicated by the example in the Rectifier and Thyatron Preamble.

MAXIMUM OPERATING CONDITIONS (Absolute values)

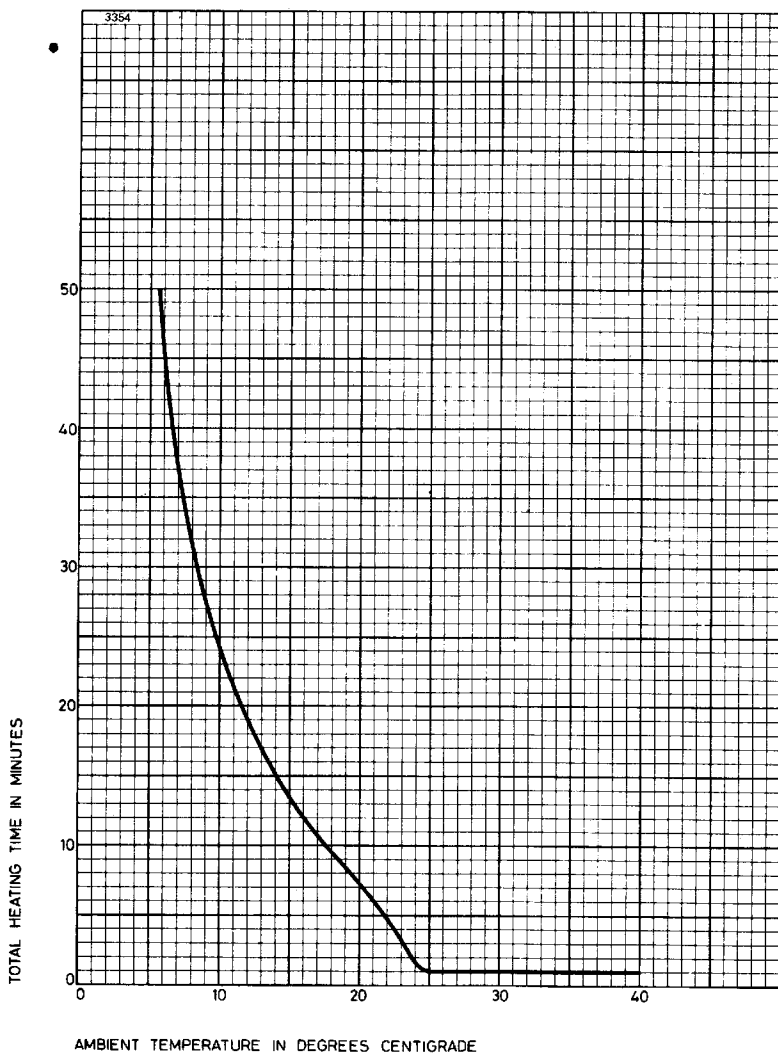
Circuit*	Condensed • mercury temp. (°C)	Peak inverse voltage (50–60Hz) (kV)	Anode current (A)		Transformer secondary voltage (r.m.s.) (kV)	Maximum d.c. output	
			peak	mean♦		(kV)	(A)
A							
Single phase full wave	25–50	16	8.0	2.0	5.6	5.0	4.0
B							
Single phase bridge	25–50	16	8.0	2.0	11.2	10.1	4.0
C							
Three phase half wave	25–50	16	8.0	2.0	6.5†	7.6†	6.0
D							
Three phase full wave	25–50	16	8.0	2.0	6.5	15.2	6.0

* See Typical Rectifier Circuits for Choke Input Filters in the Rectifier and Thyatron Preamble.

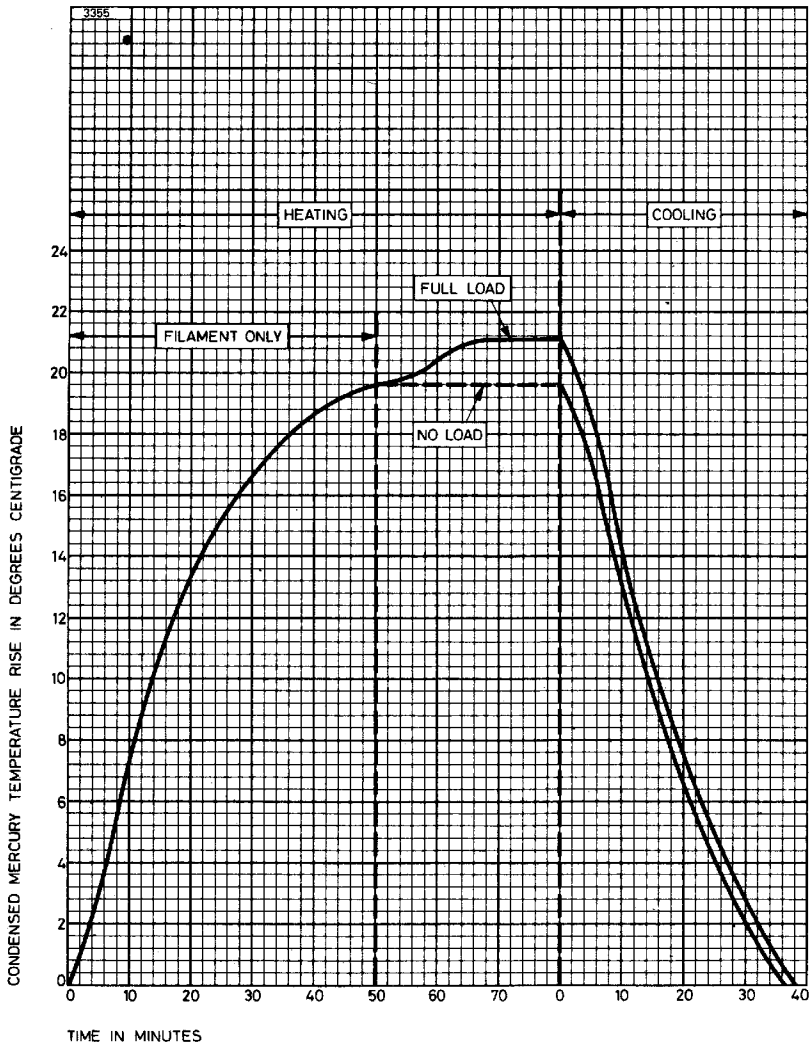
† For operation at constant full load. If the load resistance is increased, the peak inverse voltage on the tubes will exceed the ratings unless the transformer secondary voltage is reduced. The total reduction required is 14% at no load and the d.c. output voltage will be correspondingly reduced.

♦ Averaging time 30 seconds maximum.

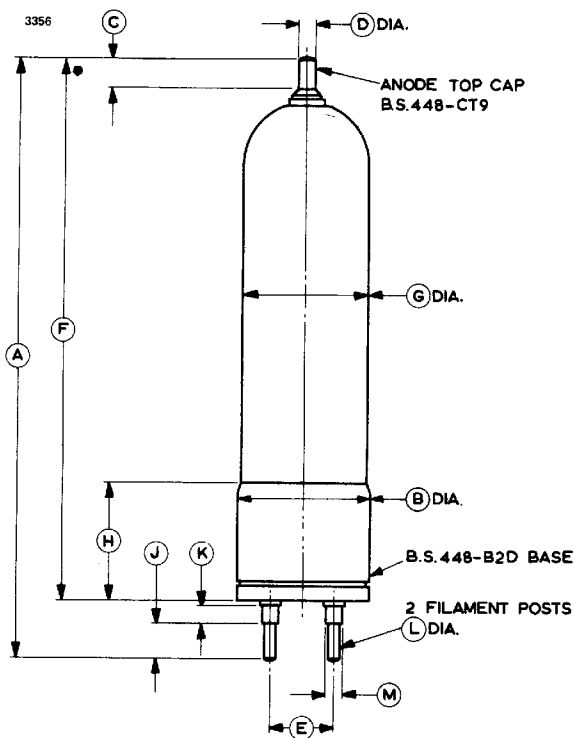
TOTAL HEATING TIME CHARACTERISTIC



TYPICAL HEATING AND COOLING CHARACTERISTIC



OUTLINE (All dimensions without limits are nominal)



Ref	Inches	Millimetres	Ref	Inches	Millimetres
A	12.937 ± 0.437	328.6 ± 11.10	G	2.860 max	72.64 max
B	2.875	73.03	H	2.563	65.10
C	0.591 max	15.01 max	J	0.750	19.05
D	0.375 ± 0.002	9.525 ± 0.051	K	0.375	9.53
E	1.375	34.93	L	0.281 ± 0.005	7.14 ± 0.13
F	11.687 ± 0.437	296.8 ± 11.1	M	0.375	9.53

Millimetre dimensions have been derived from inches.